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COMPLETE SPECIFICATION.

Improvements in Therapeutic Magnets.

I, Thomas Hammill Hicks, of the city of Detroit, in the County of Wayne and State of Michigan, United States of America Physician, do hereby declare the nature of my invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement:—

This invention relates to new and useful improvements in Therapeutic Magnet, and the invention consists in the peculiar construction and arrangement of a magnetic field combined with an electrode, all as more fully hereinafter described and shown in the accompanying drawings, in which my device is shown half in central section and the other half in elevation.

A is a hollow metallic body, preferably of globular form.

B is a magnet, secured in the center of axis of the body, and having its ends preferably projecting to the outside, said magnet being either a permanent or an electro-magnet.

C and D are screw-plugs secured in screw-threaded apertures formed in opposite sides of the body A, one of said apertures being large enough to introduce the magnet through them into the interior of the body, and if desired to fill the remaining space therein with any neutral or insulating body, such as sulphur, resin *etc.* The plugs are preferably interiorly recessed to receive the ends of the magnet to hold it securely in prescribed position.

E E are two metallic rods secured at right angles to the magnet, in the screw-plugs C and D respectively, and E^1 E^{11} *etc.*, are intermediate rods secured at intervals between the outer rods E in the shell of the body, and extending parallel to each other and to the outer rods to an equal distance from the axis of the magnet. These rods are preferably made of tubing of any metal except iron, with an iron core F enclosed in each tube and extending into proximity to the magnet.

Near their outer ends the metallic rods are connected by a cross-bar G, of insulating material, and to each of the free ends of the rods is secured an enlarged metallic pole piece K, or head, preferably of globular form and provided with a socket H or other convenient means for detachably securing thereto metallic contacts of various forms, or electrical connections, such as the plug I which has a shank J adapted to fit into the socket H.

The device being constructed substantially as described and shown is intended for therapeutical use and its application is based upon the fact that magnetism even in its most subtle form acts upon the human system in a physiological sense and can thereby be made to form a valuable curative agent in the hands of those having the necessary experience in its application, and while the scientific principles upon which this application of magnetism is based are still involved in much controversy it is established beyond doubt that each portion of the magnetic field produces a different physiological effect upon the human system, and the principal object of my invention is to construct a magnet, in which the field is divided in such a manner that the patient may be placed in a certain relation of communication with any desired portion of the magnetic field having different intensity or sign and correspondingly different action on the human system.

Thus it will be readily seen that in this respect all the metallic contacts or poles K being in different relation to the magnet, or its field have different magnetic values or properties, and thereby the physician is enabled to intelligently select the one for application which in his experience suits the case, the patient being brought either in direct contact with this pole, or if this is not practicable, indirectly through an extension secured thereto.

[*Price* 6*d.*]

A further object of my invention is to so construct the device that the physiological effects of heat or cold may be combined with the magnetic effects, as both these effects combined are much more efficacious than either alone, and to this end I have constructed the device so that it may be readily placed in a cooling or into a heated medium contained in a suitable vessel.

The extensive metallic surface and body given to the device will form in such use a good conductor.

As the device is presented in the drawings, the iron cores in the tubes E E^1 *etc.*, are inductively acted upon by the magnet B, and on account of the different relations to said magnet it may be said that the contacts K represent a magnetic scale.

A similar result, however, may be obtained by omitting the iron cores altogether and arranging the contacts K merely in different parts of the field of force of the magnet B.

The globes and tubes I construct of non-magnetic metal and preferably of a metal adapted to become electro-positive whereby I am enabled to use it as a positive electrode of a battery for producing a galvanic current which may be obviously used for therapeutical application of electricity as well as for exciting an electro-magnet in case such a magnet is used in lieu of a permanent magnet.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:

1. In a therapeutical magnet, the combination with a magnet of a series of metallic contacts or poles in the magnetic field thereof, and in graduated proximity to the poles of said magnet, and of a metallic frame supporting said magnet and series of poles in fixed relation to each other, substantially as described.
2. In a therapeutical magnet, the combination with a magnet of a series of metallic contacts or poles located in different parts of the magnetic field thereof, a hollow metallic casing inclosing and supporting the magnet, a series of metallic rods secured thereto at right angles to the axis of the magnet, and carrying the series of metallic poles, substantially as described.
3. In a therapeutical magnet, the combination of the magnet, the enclosing metallic globe A, the screw plugs C and D supporting the magnet, the tubular rods E E secured to the screw plugs, the intermediate tubular rods E^1 E^{11} *etc.*, secured to the globe A, the cross-bar G, the metallic contacts or poles K secured to the free ends of the tubular rods, and the iron cores secured in the tubular rods, all arranged substantially as described.
4. The magnet B enclosed in a metallic frame adapted to be used as an electrode in producing galvanic currents, substantially as and for the purpose described.

Dated this 5th day of November 1889.

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HICKS' Complete Specification.

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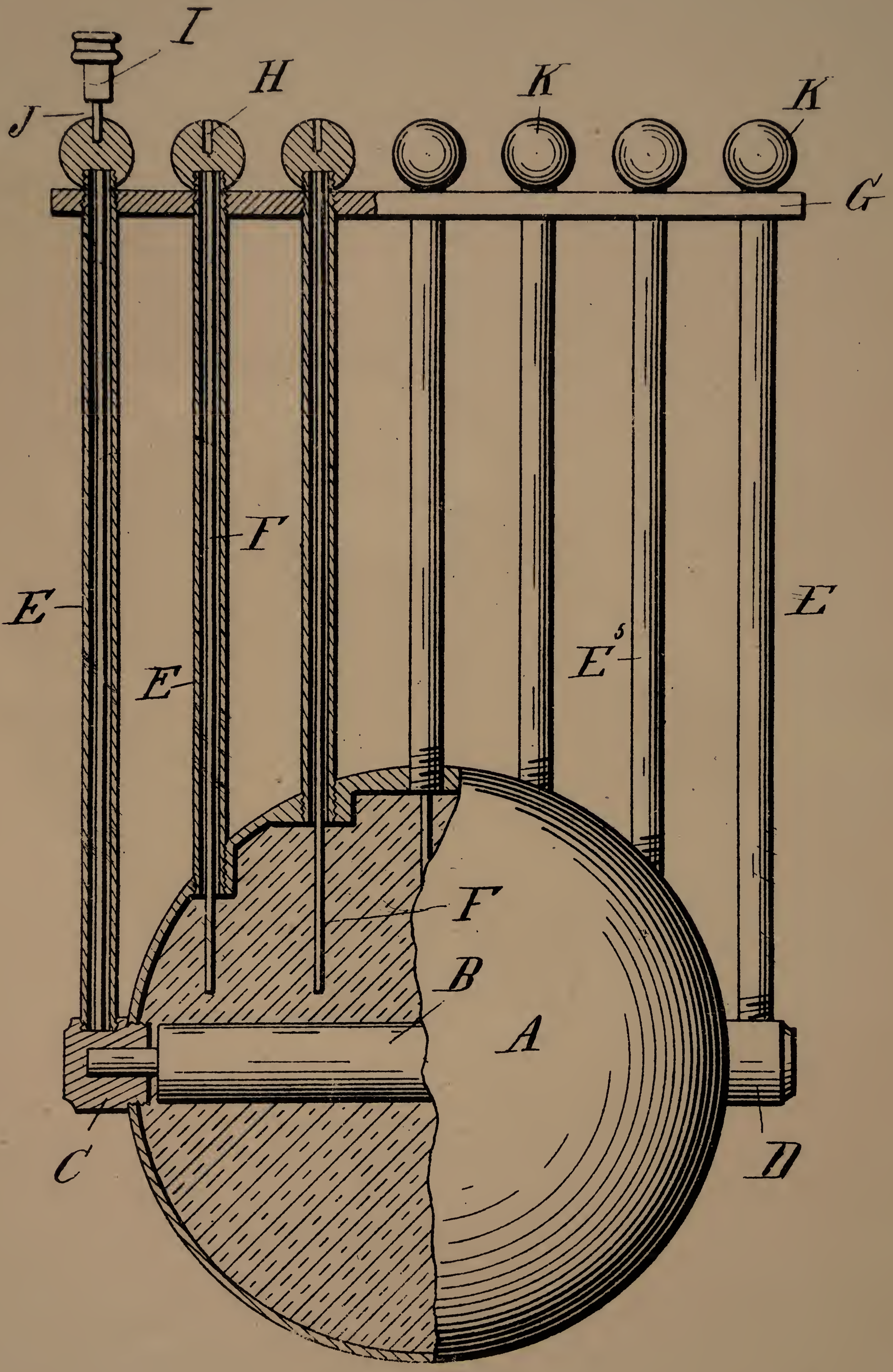

[This Drawing is a full-size reproduction of the Original.]

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